

Preface

This volume contains the *Proceedings* of the *12th Workshop on Logic, Language, Information and Computation (WoLLIC'2005)*, held in Florianópolis, Santa Catarina, Brazil, from July 19th to 22nd, 2005.

WoLLIC is a series of workshops which started in 1994 with **the aim of fostering interdisciplinary research in pure and applied logic**. The idea is to have a forum which is large enough in the number of possible interactions between logic and the sciences related to information and computation, and yet is small enough to allow for concrete and useful interaction across logic-related disciplines. Previous versions were held at: Recife (Pernambuco, Brazil) in 1994 and 1995; Salvador (Bahia, Brazil) in 1996; Fortaleza (Ceará, Brazil) in 1997; São Paulo (Brazil) in 1998; Itatiaia (Rio de Janeiro, Brazil) in 1999; Natal (Rio Grande do Norte) in 2000; Brasília (Distrito Federal, Brazil) in 2001; Rio de Janeiro (Brazil) in 2002; Ouro Preto (Minas Gerais, Brazil) in 2003; Fontainebleau (Paris, France) in 2004.

Scientific sponsorship comes from the *Interest Group in Pure and Applied Logics (IGPL)*, the *European Association for Logic, Language and Information (FoLLI)*, the *Association for Symbolic Logic (ASL)*, *European Association for Theoretical Computer Science (EATCS)*, the *Sociedade Brasileira de Computação (SBC)*, and the *Sociedade Brasileira de Lógica (SBL)*.

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(iii) *FAPESC (Fundação de Apoio à Pesquisa Científica e Tecnológica do Es-*

tado de Santa Catarina).

Contributions were received in the form of short papers in all areas related to logic, language, information and computation, including: logic and databases; logic programming and algebraic semantics; logic and linguistics; logic and artificial intelligence; logic, arithmetic and complexity; proof complexity, zero-knowledge proofs; proof theory, lambda calculus, categorical logic; model theory, descriptive complexity; real computation, algebraic complexity; logic and verification; natural computing.

Apart from the contributed papers (12), and the invited talks (5), the programme includes 5 tutorial lectures:

- *Logics with explicit evidence*

by **Melvin Fitting** (Dept. Mathematics and Computer Science, Lehman College, CUNY, USA)

- *Curry–Howard correspondence in classical set theory*

by **Jean-Louis Krivine** (Preuves-Programmes-Systèmes, Université Paris 7, France)

- *How to analyze expressiveness of logics over finite models*

by **Leonid Libkin** (Dept of Computer Science, University of Toronto, Canada)

- *A simple substitution method for ID1*

by **Grigori Mints** (Depts of Philosophy, and (by courtesy) Mathematics and Computer Science, Stanford University, USA)

- *The Strange Logic of Random Graphs*

by **Joel Spencer** (Courant Institute, New York University, USA)

All papers in the volume were reviewed under the scientific responsibility of the Programme Committee consisting of

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